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Paper No. 26

Appeal No. 93-0828

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BOARD OF PATENT APPEALS
AND INTERFERENCES

HEARING:

March 2, 1993

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte Alfred A. Fressola

Application for Patent filed August 10, 1988,
Serial No. 07/230,748, for "Method and System for Producing
Stereographic Images of Celestial Objects."

Robert H. Ware et al for appellant.

Supervisory Patent Examiner - Parshotam S. Lall
Examiner - Ellis B. Ramirez

Before Serota, Chairman, Lovell, McCandlish, Hairston and
Cardillo, Examiners-in-Chief

Serota, Chairman

This is an appeal from the examiner's final rejection of claim 42. Claims 1-18 and 22 to a method, claim 23 to stereographic pair images, and claims 24-41 to a system, have been indicated to be allowable. Claims 19-21 to a method have been objected to because claim 19 is not drafted in single sentence format. Applicant's petition to the Commissioner from the objection to claims 19-21 was denied by decision entered February 18, 1992, and applicant has sought judicial review in

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Fressola v. Manbeck and U.S. PTO, Civil Action No. 92-0939-WBB
(D.D.C.), filed April 17, 1992.

The disclosed invention is described by appellant as follows (Brief at 4):

The invention includes a method and system of producing stereographic images of celestial objects which use distance information to offset one of two images produced on a display device. A digital computer under program control is used in combination with a user input device, such as keyboard, and a display device, such as a computer monitor and/or a printer.

Claim 42 reads:

42. A system for the display of stereographic three-dimensional images of celestial objects as disclosed in the specification and drawings herein.

No references are relied upon by the examiner.

The appealed claim 42 stands rejected under 35 U.S.C. § 112 ¶ 2 as failing to particularly point out and distinctly claim the subject matter which applicant regards as his invention.

We affirm.

OPINION

35 U.S.C. § 112 ¶ 2

The claims measure the scope of the protected patent right and "must comply accurately and precisely with the statutory requirements." United Carbon Co. v. Binney & Smith Co., 317 U.S. 228, 232, 55 USPQ 381, 383-84 (1942) (citing

General Electric Co. v. Wabash Appliance Corp., 304 U.S. 364, 369, 37 USPQ 466, 468-69 (1938)); 1 A. Deller, Patent Claims, iii-viii (2d ed. 1971) (Deller). 35 U.S.C. § 112 ¶ 2 requires:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims in utility applications¹ that define the invention entirely by reference to the specification and/or drawings, so-called "omnibus" or "formal" claims, while perhaps once accepted in American patent practice, are properly rejected under § 112 ¶ 2 as failing to particularly point out and distinctly claim the invention. See MPEP § 706.03(h) (5th ed., rev. 14, Nov. 1992); Landis, Mechanics of Patent Claim Drafting, § 2 (1974).

The written description and the claims are separate statutory requirements. Modern claim practice requires that the claims stand alone to define the invention. Incorporation into the claims by express reference to the specification and/or drawings is not permitted except in very limited circumstances. As stated in McCrady, Patent Office Practice, § 90 (3d ed. 1950):

¹ This analysis is limited to claims in utility applications. Plant patent claims are defined "in formal terms to the plant shown and described." 35 U.S.C. § 162. Claims in design patents are recited in formal terms to the ornamental design "as shown" or, where there is a properly included special description of the design, the ornamental design "as shown and described." MPEP § 1503.01.

Sec 90. Reliance upon Disclosure

The general rule is that the claims should be self-contained; that is, they should not expressly rely upon the description or drawing to give them meaning. . . . The terms "substantially as described" and the like, once much used in claims (GLASCOCK 1943 § 5640) are now rarely seen. The Office disregards them in interpreting claims. . . .

Claims consisting only in a reference to the disclosure, as "The features of novelty herein disclosed," are not allowed except in design cases.

. . . .
A claim specifying "the velocity cycle shown in Figure 1" was allowed without discussion of the backfiring expression, and claims have been allowed upon limitations consisting merely in references to a table in the specification and a diagram in the drawing. [Footnotes omitted.]

Incorporation by reference to a specific figure or table of properties, as mentioned in the last paragraph above, is permitted only in exceptional circumstances where there is no practical way to define the invention in words and where it is more concise to incorporate by reference than duplicating a drawing or table into the claim. See Landis, § 51; Ex parte Squires, 133 USPQ 598 (Bd. App. 1961) (discussed in Applebaum, The One Line Picture Claim, 44 J. Pat. Off. Soc'y 379 (1962)); In re Faust, 86 USPQ 114 (Comm'r Pat. 1943); In re Tanczyn, 202 F.2d 785, 97 USPQ 150 (CCPA 1953) (reference to curve in claim not questioned); Ex parte Lewin, 154 USPQ 487 (Bd. App. 1966); Ex parte Gring, 158 USPQ 109 (Bd. App. 1967)

(reference to photomicrograph). Incorporation by reference is a necessity doctrine, not for applicant's convenience.

Early claim forms were significantly different in style and content from modern claims. See Pennwalt Corporation v. Durand-Wayland, Inc., 833 F.2d 931, 957-59, 4 USPQ2d 1737, 1758-1760 (Fed. Cir. 1987), cert. denied, 485 U.S. 961 (1988) (NEWMAN, J., commentary) (evolution of claim form); Deller, §§ 1-11. The original method of claiming in this country was based on the central definition where the claims named the broad features of the invention (often just an enumeration of the elements and the reference characters of the drawings) together with a phrase such as "substantially as set forth." These claims were construed to "incorporate by reference the description in the specification and equivalents thereof." Pennwalt, 833 F.2d at 959, 4 USPQ2d at 1759. During this early period, "[t]he drawings and description were the main thing, the claims merely an adjunct thereto." Deller, § 4.

Beginning with the Patent Act of 1870, the claims took on more importance. As described in Deller, § 7:

They became much more self-sufficient in that they gave the cooperative relationship of the elements enumerated, instead of a mere catalog of elements followed by some such phrase as "constructed and adapted to operate substantially as set forth."

The method of claiming shifted from the central definition to the peripheral definition. As described in Deller, § 5:

Central definition involves the drafting of a narrow claim setting forth a typical embodiment coupled with broad interpretation by the courts to include all equivalent constructions. Peripheral definition involves marking out the periphery or boundary of the area covered by the claim and holding as infringements only such constructions as lie within that area.

The conversion from the central definition to the peripheral definition was due to the more rigorous requirements for the claim to stand alone to define the invention and the refusal of the courts to expand the scope of the claims beyond their literal terms. Modern claim interpretation is based on the peripheral system where the scope of the claim is not expanded. See Wilson Sporting Goods Co. v. David Geoffrey & Assoc., 904 F.2d 677, 684, 14 USPQ2d 1942, 1948 (Fed. Cir.), cert. denied, 111 S.Ct. 537 (1990) (doctrine of equivalents does not expand claims, it only expands right to exclude to "equivalents"). Modern claim interpretation requires that the claims particularly point out and distinctly claim the invention without reading in limitations from the specification. Pennwalt, 833 F.2d at 959, 4 USPQ2d at 1759-60.

Phrases in claims referring back to the description and drawing such as "substantially as described" or "as herein shown and described" were once customary in claims in the days of the central definition. Deller, § 25. Expressions referring back to the disclosure are sometimes referred to by patent authors as

"backfiring" expressions. See Douglas, Backfiring Expressions in Claims, 4 J. Pat. Off. Soc'y 605 (1922); Deller, § 24; Glascock and Stringham, Patent Law: Substantive Aspects, § 5640 (1943). The "substantially as described" expressions were generally used as an addendum to the elements of the claim. Insofar as we have been able to determine, claims consisting entirely of a reference to the specification and/or drawings were held to be indefinite very early in the period of transition toward increased definiteness in claiming. As stated in Ex parte Rice, 1874 Dec. Comm'r Pat. 44, 45 (Comm'r Pat. 1874):

In this case the applicant puts in but a single claim, reading as follows:

As a new article of manufacture, mats made of corn-husks, substantially in the manner described.

The examiner ought to have objected to this claim, for the reason that it does not properly comply with the requirements of section 26 of the patent act, which, after setting forth what shall be the character of a specification, says, "and he shall particularly point out and distinctly claim the part, improvement, or combination which he claims as his invention or discovery." The mere reference to the body of the specification by the terms "substantially in the manner described" is not "particularly" pointing out and "distinctly" claiming the alleged invention, and therefore does not comply with the requirements of the statute. [Emphasis in original.]

See also Ex parte Oswald, 1925 Dec. Comm'r Pat. 20, 23 (Comm'r Pat. 1924); Stringham, Patent Claims; A Drafter's Manual, § 5641 (1939).

The "substantially as described" expressions appended to claims caused a great deal of difficulty and confusion in claim interpretation where they might or might not be given effect in implying limitations in from the specification.

See Robinson, The Law of Patents for Useful Inventions, § 750 (1890) ("The phrase "substantially as described," in the Claim, signifies much or little, as the patentee evidently designed."). In Ex parte Shepler, 1903 Dec. Comm'r Pat. 17, 19 (Comm'r Pat. 1902), the Commissioner held that the phrase "substantially as described" was vague and indefinite:

[The words "substantially as described"] do not themselves import any definite limitation into the claim. They leave that to the construction of the court in view of the facts brought to its attention in the particular case before it, and therefore to this extent they are vague and indefinite. If there are any particular limitations which the applicant wishes these words to import into the claim, he should state them clearly and definitely, instead of attempting to include them by a blanketing clause at the end of the claim, the effect and meaning of which is, according to his own showing, very uncertain. The law requires that the patentee distinctly claim the features which he regards as his invention, and it is the duty of this office to require that the claims be made definite and certain. . . .

. . . .
It is no more permissible on principle to refer to the description for some limitations which should be and are intended to be included in the claim than it is to refer to the description for all of the limitations, as by a claim covering "The device substantially as described."

Without regard to the effect which the courts may in particular instances give to the words "substantially as described," it must be held that

this Office in its treatment of claims must regard them as inconsequential.

Note the statement in the next-to-last paragraph that it was not acceptable for the claim to rely on the description for all of the limitations.

In National Tube Co. v. Mark, 216 F. 507, 515-22 (6th Cir. 1914), the court reviewed the authorities, including Shepler, and held that phrases such as "substantially as described" should be given no interpretative importance. To the extent that such phrases require the claim to be read in light of the specification, they add nothing to the claim. The court in National Tube did not review any cases where the claim was entirely a reference to the specification, probably because it, like us, was unable to find any. The National Tube case marks the beginning of the end of the use of expressions referring back to the specification and drawings. See Jessup, The Doctrine of Equivalents, 54 J. Pat. Off. Soc'y 248 (1972). The Patent Office has consistently refused to afford weight to "substantially as described" and similar expressions since the Shepler and National Tube cases. See McCrady, Patent Office Practice, § 104 (1st ed. 1928), § 71 (2d ed. 1946), § 90 (3d ed. 1950) and § 90 (4th ed. 1959); Stringham, Patent Claim Drafting, § 5642 (1930); Douglas, 4 J. Pat. Off. Soc'y at 609 (Concluding that "expressions like 'substantially as described' are useless and obsolete appendages

of no definite interpretative meaning" and claims should be cleared of such expressions during examination.).

One mention of incorporation by reference subsequent to National Tube has been found in Smith v. Snow, 294 U.S. 1, 11 (1935):

While the claims of a patent may incorporate the specifications or drawings by reference, see Snow v. Lake Shore R. Co., 121 U.S. 617, 630 [(1887) (having the claim phrase "when constructed and operated substantially as described")], and thus limit the patent to the form described in the specifications, it is not necessary to embrace in the claims or describe in the specifications all possible forms in which the claimed principle may be reduced to practice.

However, we believe that the first part of this statement would no longer apply under modern standards of claim definiteness. Moreover, Snow v. Lake Shore was not a case where the claim consisted entirely of a reference to the disclosure.

The existence of omnibus claims in U.S. applications in the middle part of this century was apparently due to foreign patent practice, rather than any continuing challenge to the propriety of such claims under § 112 ¶ 2. As stated in MPEP § 706.03(h) (1st ed. 1949):

706.03(h) Nonstatutory Claim

Many applications when filed contain an omnibus claim such as "A device substantially as shown and described". Such a claim is often included in an application as filed because the application is to serve as a basis for a duplicate foreign application in a country where this type

of claim is permitted. This type of claim is not permitted in a United States patent because R.S. 4888, 35 U.S.C. 33, states that Applicant "shall particularly point out and distinctly claim the part, improvement, or combination which he claims as his invention or discovery".

Recent versions of the MPEP merely point out that the omnibus claim form is indefinite and should be rejected under § 112 as failing to particularly point out and distinctly claim the invention, which is the basis for the examiner's rejection.

Analysis and decision

Claim 42 is directed to a "system for the display of stereographic three-dimensional images of celestial objects as disclosed in the specification and drawings herein." A "system" is an "apparatus." In re Walter, 618 F.2d 758, 762 n.2, 205 USPQ 397, 402 n.2 (CCPA 1980). The apparatus is described by appellant as follows (Reply Brief at 2):

[I]t is not a particular part of the specification and drawings that is referred to as defining the metes and bounds of this claim, but rather all of the specification and drawings directed to the display of stereographic three-dimensional images of celestial objects. The device is thus the device specifically shown in Figure 2 under the control of the control program as set forth in Figures 14A - 14E, which give rise to the displays shown in Figures 4 - 9 and 11 with respect to stereographic three-dimensional images of celestial objects.

Figure 2 is a block diagram having a computer 20, monitor 22, keyboard 23, and printer 24 described in the specification at page 11, lines 1-2, page 16, lines 20-23, and page 28, lines 21-

26, as an IBM PC or compatible computer and Epson printer. Figures 14A-14E are flow charts of the computer program set forth in Table 1 (pages 30-74) to operate on the data in Table 2 (pages 75-147). Therefore, the disclosed apparatus is a common general purpose digital computer running a disclosed program, the program being the "means" for performing the steps necessary to calculate and display stereographic images.

We agree with the examiner's conclusion that claim 42 is indefinite and fails to particularly point out and distinctly claim what applicant regards as his invention as required by § 112 ¶ 2. First, claim 42 does not comply with the requirement of § 112 ¶ 2 that the claims particularly point out and distinctly describe the invention because it relies entirely on incorporation by reference of the specification and drawings. The written description and the claims are separate statutory requirements. As stated long ago in Ex parte Holt, 1884 Dec. Comm'r Pat. 43, 62-63 (Comm'r Pat. 1884):

The aim, end, and purpose of the specification, under the present statute, is to describe the invention sought to be covered by the patent, and the manner of making, constructing, and using the same. The aim, the end, the purpose of the claim is to point out particularly and distinctly define the invention to be secured to the individual. The claim is the measure of the patent, and the day has passed when the courts will search the specification for information which it is the very office of the claim to impart. [Emphasis in original.]

A claim which refers to the specification defeats the purpose of a claim. The limited exceptions which permit incorporation by reference do not apply because the system can be described in words without reference to the specification and drawings, as evidenced by system claims 24-41.

Second, the history of phrases which incorporate by reference to the specification and/or drawings shows the difficulty and inconsistency in interpreting such phrases, which have no fixed legal meaning. Claim 42 is indefinite because it is impossible to determine how much of the disclosure is incorporated by reference into claim 42, or to what extent claim 42 would be interpreted to cover equivalents. Although claim 42 does not include an equivocal term like "substantially," this is not considered to make the claim more definite. See National Tube, 216 F. at 518 (parts named in the claim are intended to be named with reference to the specification and drawing and the reference cannot be made narrower by saying "as described" nor broader by saying "substantially"). The phrase "as disclosed in the specification and drawings herein" in claim 42 is interpreted to read on the whole or any part of the disclosure.

Third, assuming, arguendo, that incorporation by reference were a permissible mode of claiming, claim 42 is indefinite because the specification and drawings to which it

refers do not particularly point out and distinctly define what invention is intended to be circumscribed by claim 42. Instead of succinctly enumerating the elements and limitations which constitute the boundary of the invention, claim 42 requires that the limitations be gleaned from an analysis of 19 figures of drawings and 147 pages of specification, including 28 pages of description of the background prior art and the method, 45 pages of program listing in Table 1, 73 pages of data in Table 2, and additional disclosed commercial Turbo Graphix[®] procedures. As has been held by our former reviewing court in the case of In re Clemens, 622 F.2d 1029, 206 USPQ 289 (CCPA 1980), the specification in order to comply with the requirements of the first paragraph of 35 U.S.C. 112, frequently includes matter which is not the invention of the applicant. The description includes large quantities of extraneous matter such as example images, descriptions of prior art, alternative features (inverse display, marking arrow, stereo versus nonstereo display, etc.), which obscures the system claim boundaries; it does not particularly point out and distinctly claim the invention. The fact that the specification is directed primarily at the method for displaying, while claim 42 is for a system, further contributes to making claim 42 indefinite. The specification is

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also indefinite because of the following statements in the specification (page 29):

Although described in part by a computer program written in Turbo Pascal® for use on an IBM PC® or compatible personal computer, it is apparent that the concepts described can be readily adapted to other computer languages and computer systems.

Appellant apparently wants to protect the underlying process steps of the program source code in Table 1 as performed by the computer, not the source code itself which does not run on the computer. However, instead of reciting the steps performed by the program in terms of English language descriptions, the specification requires extraction of the steps embedded in the program code written in Pascal programming language; this does not particularly point out or distinctly claim the invention. The following statement at the end of the specification also renders the scope of claim 42 indefinite (page 29):

[S]ince changes may be made in carrying out the methodology of the invention, including the computer program or other instructions used, it is intended that all matter contained in the above description or shown in the accompanying drawings shall be interpreted as illustrative, and not in a limiting sense.

In view of this statement, it is impossible to tell what parts of the specification are and are not intended to be limiting, or what modifications would fall within the scope of claim 42.

We turn now to appellant's arguments. It is argued
(Brief at 8):

Because Congress has placed no limitations on how an applicant claims his invention, applicant respectfully argues that claim 42, a so-called "omnibus" claim, specifically references the specification and, therefore, particularly points out and distinctly claims the subject matter which the applicant regards as his invention.

Aside from the formal single sentence claim requirement, there are few restrictions on how an invention must be claimed as long as the claim satisfies § 112 ¶ 2. However, the omnibus claim does not satisfy § 112 ¶ 2 because the claim does not itself define the invention, but relies on external material.

It is argued (Brief at 9):

Appellant respectfully argues that claim 42 specifically references the specification and the figures of the patent application and, therefore, the specification and the figures of the patent application should not be analyzed to determine the degree of precision and particularity of the claim language, but rather should be interpreted by one possessing the ordinary level of skill in the pertinent art as being the claimed invention.

Appellant seems to be arguing that claim 42 satisfies § 112 ¶ 2 because it points specifically to the specification and drawings, regardless of whether the referred to specification and drawings satisfy § 112 ¶ 2. Assuming, arguendo, that incorporation by reference into the claim is allowed, it is the claim together with the incorporated matter, i.e., the claim as a whole, that must comply with § 112 ¶ 2.

It is argued that claim 42 is, in effect, a "picture claim" which is limited to the exact structure of the invention as shown in specification and figures (Brief at 10):

[A] claim which merely recites the specification and the drawings is most limited in scope and protects only the device shown and described.⁶

6. Ex parte Marsh, 2 O.G. 197 (1872) (where the Court held that if a claim is a mere reference to the drawings only the device shown in the drawing is protected.)

This is only appellant's interpretation of claim 42. Claim 42 can be interpreted to incorporate all or only part of the disclosure. In addition, it is not certain that claim 42 is limited to the exact description in the specification and drawings in view of the statements made at page 29 of the specification discussed, supra. The Marsh case, more conveniently found at 1872 Dec. Comm'r Pat. 177 (Comm'r Pat. 1872), was a case where the claims included reference letters; the claims were not omnibus-type claims. Reference characters are now treated as having no effect on claim scope. MPEP § 608.01(m). Old cases like Marsh are not reliable authority for standards of claim interpretation and definiteness.

It is argued that claim 42 provides the requisite notice to the public of what will infringe (Brief at 12):

[T]he rejected claim 42 is quite clear and would be understandable to one of ordinary skill in the

art as such person would simply examine the specification and the corresponding figures and would know exactly what the invention is. In fact, a person of ordinary skill in the art would be provided with more specific notice because if his product was not specifically described and shown in the specification and the figures, he would be sure that he was not infringing the patent.

As discussed, supra, we do not agree that the specification and drawings, assuming they could be incorporated by reference into claim 42, particularly point out and distinctly claim the invention. The claims define the boundary of the invention. See In re Vamco Machine & Tool, Inc., 752 F.2d 1564, 1577 n.5, 224 USPQ 617, 625 n.5 (Fed. Cir. 1985). The metes and bounds of what the Appellant regards as his invention must be clearly set forth in order that the public at a time after the patent is granted may evaluate what is infringed, and what would be dominated by or within the patented claims. See In re Hammack, 427, F.2d 1378, 166 USPQ 149 (CCPA 1970) and In re Venezia, 530 F.2d 956, 189 USPQ 199 (CCPA 1976). The Court of Appeals for the Federal Circuit in Vas-Cath Inc. v. Mahurkar, 935 F.2d 1555, 19 USPQ2d 1111 (Fed. Cir. 1991) reemphasized the importance of a patent claim clearly defining the scope or metes and bounds of the claimed subject matter when it stated:

"The definiteness requirement shapes the future conduct of persons other than the inventor, by insisting that they receive notice of the scope of the patented device.

That one skilled in the art understands the written description does not equate with knowledge of the boundary lines. The statements in the declarations by Steven A. Mirmina under 37 CFR 1.132 submitted June 25, 1990, and July 20, 1990, that "Claim 42 . . . is readily discernable in scope" (§ 21 of both declarations), are mere conclusions by a layperson who has not been established to have any patent qualifications.

Appellant notes that omnibus-style claims are accepted in the United Kingdom and that the United Kingdom's patent law regarding claim requirements is substantially similar to § 112 ¶ 2 (Reply Brief at 2-4). The only issue is United States law. We decline to speculate on the reasons why foreign countries allow or require omnibus-style claims.

CONCLUSION

The rejection of claim 42 for failing to particularly point out and distinctly claim the invention under 35 U.S.C. § 112 ¶ 2 is affirmed.

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No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR 1.136(a).


AFFIRMED



Saul I. Serota
Chairman



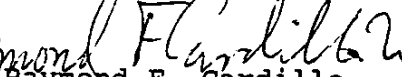
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